IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) An optical receiver, comprising:

an avalanche photodiode having a multiplication factor;

a voltage source for supplying a bias voltage to the avalanche photodiode;

a temperature sensor for monitoring a temperature of the avalanche photodiode;

a controller for controlling the voltage source; and

a reference generator including a register and a digital-to-analog converter, the register storing a relation between a reference voltage and the temperature of the avalanche photodiode in a digital form, the reference generator being configured to retrieve a reference voltage stored in the register by indexing the temperature elf the avalanche photodiode and to output the retrieved reference to the controller in an analog form by converting with the digital-to-analog converter,

wherein the multiplication factor of the avalanche photodiode is kept substantially constant by adjusting the bias voltage to the avalanche photodiode based on the temperature monitored by the temperature sensor,

the reference generator further includes a register and a digital-to-analog converter, the register storing a relation between the reference voltage and the temperature in a digital form, and

the reference generator retrieves the register by indexing the temperature and outputs the retrieved reference voltage converted into an analog form by the digital-to-analog converter to the controller.

2-4. (Cancelled)

5. (Currently Amended) The optical receiver according to claim [[5]] 1, wherein the reference generator further includes a digital interface for setting the reference voltage and the temperature of the avalanche photodiode in the register.

6. (Currently Amended) [[The]] An optical receiver ~~according to claim 1~~ with a function to control a multiplication factor of an avalanche photodiode to be substantially independent of a temperature of the avalanche photodiode, comprising:

a voltage source for supplying a bias voltage to the avalanche photodiode;

a temperature sensor for monitoring a temperature of the avalanche photodiode;

~~further comprises~~ a controller for controlling the voltage source; and

a voltage divider ~~for dividing~~configured to divide the bias voltage output from the voltage source and ~~outputting~~ to output a divided voltage to the controller,

wherein the voltage divider includes a variable resistor having a resistance controlled by the temperature sensor.

7. (Original) The optical receiver according to claim 6, wherein the temperature sensor is integrated in the variable resistor.

8. (Original) The optical receiver according to claim 6, wherein the variable resistor further includes a register for storing resistance values corresponding to temperatures, the variable resistor retrieving a resistance value from the register based on the temperature monitored by the temperature sensor.

9. (Currently Amended) A method for manufacturing an optical receiver including an avalanche photodiode having a multiplication factor, a temperature sensor for monitoring temperatures, a voltage source for supplying a bias voltage to the avalanche photodiode, a controller for controlling the bias voltage and a reference generator for providing a reference voltage based on the temperature monitored by the temperature sensor to the controller, the controller controlling the voltage source based on the comparison of the bias voltage [[to]] with the reference voltage so as to maintain the multiplication factor of the avalanche photodiode substantially constant with respect to temperatures, the method comprising the steps of:

measuring reference voltages in at least two specific temperatures different to each other so as to maintain an output of the avalanche photodiode substantially constant; and

calculating reference voltages corresponding to temperatures except for the specific temperature based on the measured reference voltage.

10. (Currently Amended) The method for manufacturing the optical receiver according to claim 9, wherein the optical receiver further ~~including~~ includes a register for storing data that relates the reference voltage to the temperature,

and the method further comprising the steps, after the calculation[[:]] of the reference voltages, of setting the measured reference ~~voltage~~ voltages and the calculated reference voltage with corresponding temperatures into the register.

11. (Original) The method for manufacturing the optical receiver according to claim 10, wherein the register and the temperature sensor are integrated in the reference generator.

12. (Currently Amended) A method for manufacturing an optical receiver including an avalanche photodiode having a multiplication factor, a temperature sensor for monitoring temperatures, a voltage source for supplying a bias voltage to the avalanche photodiode, a controller for controlling the bias voltage and a voltage divider ~~for dividing~~ configured to divide the bias voltage based on the temperature monitored by the temperature sensor and ~~providing~~ to provide the divided voltage to the controller, the controller controlling the voltage source so as to maintain the multiplication factor of the avalanche photodiode substantially constant to temperatures, the method comprising the steps of:

measuring resistance values of the variable resistor in at least two specific temperatures ~~difference to~~ different from each other so as to maintain an output of the avalanche photodiode substantially constant to the temperature; and

calculating resistance values corresponding to temperatures except for the specific temperature based on the measured resistance value of the variable resistor.

13. (Currently Amended) The method for manufacturing the optical receiver according to claim 12, wherein the optical receiver further ~~including~~ includes a register for storing resistance values of the variable resistor and the corresponding temperatures, and

the method further comprising the steps after the calculation[[:]] of the resistance values, setting the measured resistance values and the calculated resistance values with corresponding temperatures into the register.

14. (Original) The method for manufacturing the optical receiver according to claim 12, wherein the register and the temperature sensor are integrated in the variable resistor.

15. (New) The optical receiver according to claim 6, further comprising:

a reference generator for outputting a reference voltage to the controller,

wherein the controller controls the voltage source based on a comparison of the reference voltage with the divided voltage output from the voltage divider.

16. (New) The optical receiver according to claim 6, wherein the variable resistor is a digitally variable resistor.

17. (New) The optical receiver according to claim 16, wherein the voltage divider further includes a first resistor serially connected to the digitally variable resistor and a second resistor connected in parallel to the digitally variable resistor and the first resistor.